

COASTAL CONNECTIONS



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C O A S T A L M A N A G E M E N T P R O F I L E



Mike Molnar
Program Manager,
Indiana Lake Michigan
Coastal Program

Where you live: Indianapolis, Indiana.

Family and friends: Parents Mike and Sue Molnar and brother Jason, age 37. I also have a great group of friends in the U.S. and overseas who keep me "real" and in touch with my roots.

Education: B.S. in secondary education and biological sciences, Miami University in Oxford, Ohio; M.P.A. in environmental policy, science, and law, Indiana University.

Most fulfilling aspect of your job: Working to preserve natural resources.

Most challenging aspect of your job: The most challenging aspect is keeping abreast of, and strategically linking the multitude of, coastal initiatives at the regional and federal level.

One work-related accomplishment that makes you proud: The creek restoration project at Indiana Dunes State Park [see next page].

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FOCUS

LAND COVER DATA GOES COAST-TO-COAST

Land cover information produced in five-year installments will help resource managers from across the nation gauge ecosystem trends and plan for the future.

Coastal habitat losses and gains, changes in pollution or sedimentation—plus crucial development trends affecting water and habitat quality—can be gleaned from timely, accurate land cover information.

Coastal professionals seeking this information recently received help with the release of land cover maps covering coastal areas of the conterminous U.S. for the time periods of 1996 and 2001.

These data were developed by the Coastal Change Analysis Program (C-CAP), an effort headed by the National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center. C-CAP works in close coordination with state coastal management agencies, the U.S. Geological Survey, the Multi-Resolution Land Characteristics consortium, and other federal programs.

C-CAP products inventory coastal intertidal areas, wetlands, and adjacent uplands with the goal of monitoring these habitats on a five-year repeat cycle. The data are developed using remotely sensed imagery and feed directly into the National Land Cover Database (NLCD) and the National Map. Together, the NLCD and C-CAP products create one seamless land cover product for the nation.

In addition, by December 2007 C-CAP will help produce 2001 land cover data for Hawaii and Puerto Rico, and the NLCD will produce 2001 land cover data for Alaska.

Consistency, Accuracy, Flexibility

According to Nate Herold, the Center's C-CAP coordinator, these land cover products solve a common problem faced by coastal professionals. "Land cover data are developed by many different organizations, but each organization typically produces data based on a particular need or objective," says Herold. "The problem with this is that it doesn't give users the benefit of an 'apples to apples' comparison and may limit relevance of the data to one particular area, or for one particular purpose," he adds.

By contrast, C-CAP's focus is on the production of nationally standardized products, with a target accuracy requirement of 85

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One personal accomplishment that makes you proud: When I realized that teaching was not going to be a lifelong career, I went back to school for my graduate degree. It was hard, but worth it—I'm doing something now that I'm passionate about.

Things you do in your spare time: Hiking and camping.

"I remember hearing about coastal management for the first time when I was 10 years old and fishing for walleye with my family out on Lake Erie," says Mike Molnar. "I met someone from Sea Grant who was taking marine samples and thought, 'That sounds like a great job!'"

Just recently, Molnar's own "great job" hit a high note when the agency received an Award of Excellence from the Association of Conservation Engineers for its restoration of Dunes Creek at Indiana Dunes State Park.

"Before the restoration, a large parking lot covered part of the creek since the 1920s, which contributed to high *E. coli* levels at beaches along the Indiana shore of Lake Michigan," says Molnar.

"With funding from NOAA and our state Department of Natural Resources, we removed the parking lot, exposed the creek to the sun, and restored the natural stream. Now fish and bird life has returned to the creek and water quality is showing signs of improvement. This was truly a great cooperative project."

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percent. That accuracy, plus C-CAP's "big-picture" view, enables coastal managers to collaborate with confidence and share resource information across local and state regulatory boundaries.

C-CAP products can be used to gather data on habitats, nonpoint-source pollution, erosion, impervious surfaces, and other ecosystem factors [see "Land Cover Mapping Aids"]. Moreover, the products are developed with flexibility in mind, allowing users to refine the data sets for their needs and use C-CAP in concert with other databases.

The products also provide critical upstream information. "Coastal areas are affected by inland areas upstream of the site," says Herold, "and, with access to this data, coastal managers can start connecting the changes seen upstream to the effects downstream."

One standout element of C-CAP is the change information it provides, which allows coastal managers to see land changes over time, including development trends and the impacts of land use on water quality and overall ecosystem health. By pinpointing locations where changes have occurred and including a change database, C-CAP can aid managers who are crafting guidelines for future resource use or creating models that simulate land use impacts.

C-CAP in the Great Lakes

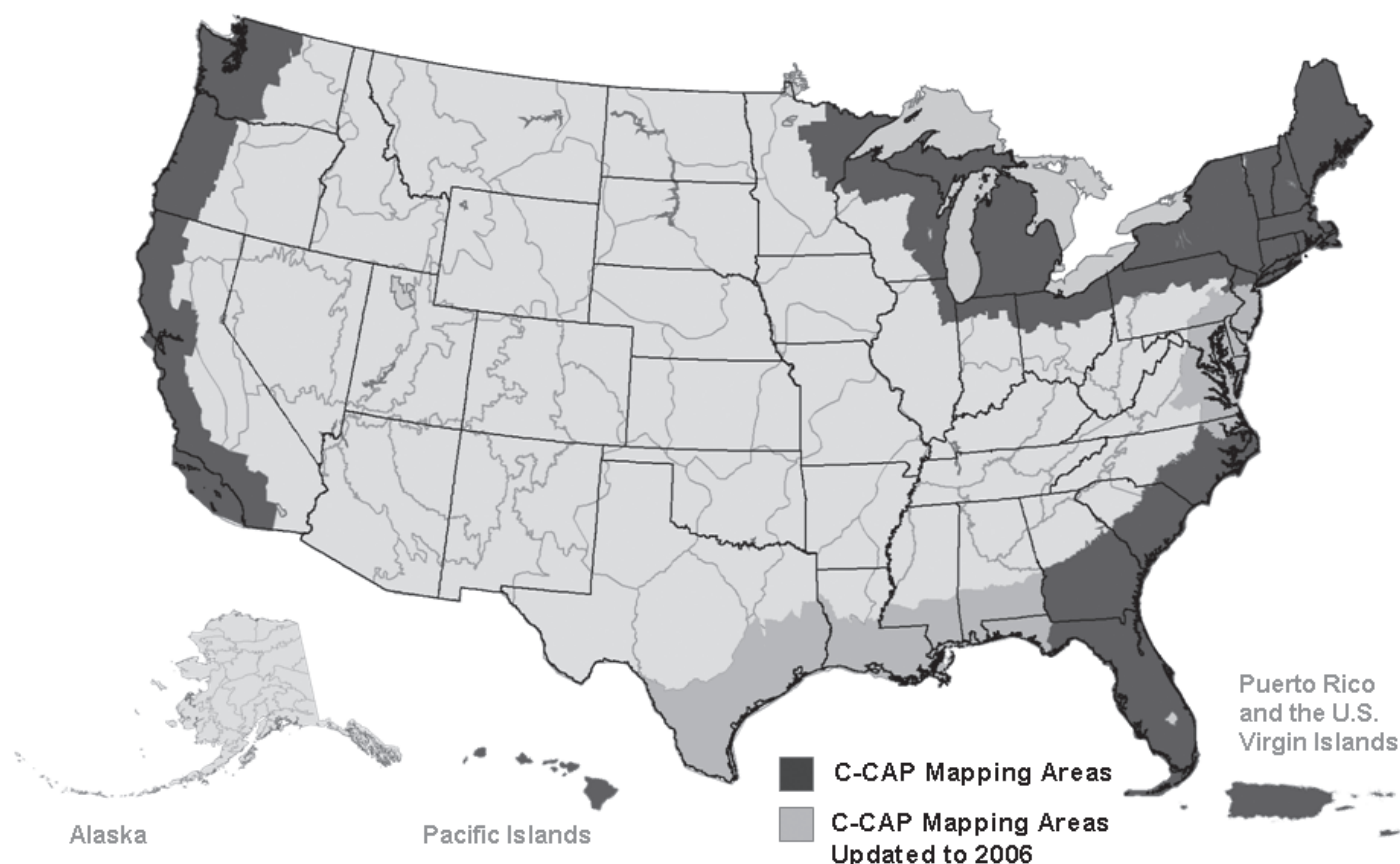
Roger Gauthier, a program manager with the Great Lakes Commission and the interim executive director for the Great Lakes Observing System (GLOS), has witnessed the capacity of C-CAP products to address a wide range of coastal ecosystem issues:

- The Great Lakes Commission has coordinated use of C-CAP data as input to the NOAA Habitat Priority Planner (HPP) to determine critical areas for habitat protection or restoration. "With model output from HPP, we can create visual 'snapshots' that help stakeholders make decisions," says Gauthier. "By seeing where flora and fauna are adversely affected by fragmentation, we can determine how to get the biggest 'bang for our buck' in implementing restoration projects to protect endangered and threatened species and habitat."
- Watershed modelers are analyzing how different agricultural management practices can positively affect tributary streams to the Great Lakes by changing the nutrient and sediment load. "The watershed models now being developed are predicated on current land cover information provided by C-CAP," notes Gauthier.
- A presidential executive order created an interagency task force to resolve major problems across the Great Lakes region. A high-priority objective of the task force is to restore up to 1.1 million acres of wetlands. According to Gauthier, "The 2001 C-CAP data sets are the only vehicle I know that provides the most current, comprehensive mapping of wetlands across the region. That's why it's so critical for C-CAP to be updated on its five-year schedule—so we can determine trends, on a comprehensive basis, of wetland resources over time."

Over the next year, the Center plans to provide updated C-CAP mapping for a significant portion of the Great Lakes region. To learn more about C-CAP products, see www.csc.noaa.gov/landcover/.



Land Cover Mapping of the Coast



Land Cover Mapping Aids

The following products and services from the Center can help customers make the most of their land cover information:

To Predict Water Quality Impacts

With the Nonpoint Source Pollution and Erosion Comparison Tool, users can predict potential water-quality impacts to rivers and streams from nonpoint-source pollution and erosion.

See www.csc.noaa.gov/crs/cwq/nspect.html.

To Prioritize Habitat Conservation Efforts

Users find the Habitat Priority Planner tool helpful when setting priorities for conservation and restoration planning. The tool helps users identify patches of habitat and evaluate their quality. Batch-processing capabilities allow users to easily evaluate the impacts of multiple development, conservation, and restoration scenarios.

See www.csc.noaa.gov/hpp/.

To Determine Impervious Surface Coverage

With the Impervious Surface Analysis Tool, users can access remotely sensed imagery to calculate the percentage of impervious surface in a given area.

See www.csc.noaa.gov/crs/cwq/isat.html.

Course: Remote Sensing for Spatial Analysts

By the conclusion of this two-day course, spatial analysts will understand the benefits and limitations of using remote sensing in coastal management and will learn how to use remote sensing data in a geographic information system (GIS) environment. For more information, visit www.csc.noaa.gov/crs/rs_training.html.



Coastal Connections is a publication of the National Oceanic and Atmospheric Administration Coastal Services Center, produced for the coastal resource management community. Each issue of this free bimonthly newsletter focuses on a tool, information resource, or methodology of interest to the nation's coastal resource managers.

Please send us your questions and suggestions for future editions. To subscribe or contribute to the newsletter, contact our editors at

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NEWS AND NOTES

137th Annual Meeting of American Fisheries Society

Nearly 2,500 registrants are expected to attend the annual meeting of the American Fisheries Society in San Francisco, California, September 2 to 6, 2007. It will include workshops, symposia, and a career fair. For more information, visit www.fisheries.org/sf/.

NOAA Launches Website Showing Gulf of Mexico Marine Debris

The NOAA Gulf of Mexico Marine Debris Project provides users with critical information and maps of debris-laden survey areas and also aids debris-removal efforts coordinated by state natural resource managers, the U.S. Coast Guard, and the Federal Emergency Management Agency. To learn more, visit <http://gulfofmexico.marinedebris.noaa.gov>.

Conference to Address Climate Change and Coastal Zone Rights

On September 20 to 21, the University of South Carolina School of Law and Georgetown University Law Center will host a conference in Columbia, South Carolina—Balancing Private and Public Rights in the Coastal Zone in the Era of Climate Change: The Fifteenth Anniversary of *Lucas v. South Carolina Coastal Council*. The conference will explore how the *Lucas* decision and other takings decisions have affected coastal regulatory policies and government regulatory authority. For more information, visit www.law.georgetown.edu/gelpi/ConfBrochure07.pdf.

Transitions

Whitley Saumweber has joined NOAA's Estuarine Reserves Division as Integrated Ocean Observing System (IOOS) coordinator. Saumweber previously worked as a researcher in biological oceanography at the University of New Hampshire... **Dr. Jack Hayes**, who previously served with NOAA in a number of senior executive positions, will return in September as assistant administrator for weather services and director of the National Weather Service. Most recently, Hayes was director of the World Weather Watch Department in the World Meteorological Organization... **Pati Delgado**, formerly a program specialist in NOAA's Estuarine Reserves Division, has taken a position as research coordinator at the Chesapeake Bay National Estuarine Research Reserve in Maryland.

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